



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

(11)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/117,363	09/03/93	COOK	1S1S1169

HM12/0121

JOSEPH LUCCI  
WOODCOCK, WASHBURN, KURTZ,  
MACKIEWICZ & NORRIS  
ONE LIBERTY PLACE - 46TH FLOOR  
PHILADELPHIA PA 19103

EXAMINER
HOOTTEMAN, S

ART UNIT	PAPER NUMBER
1634	35

DATE MAILED: 01/21/99

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trad marks**



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER OF  
PATENTS AND TRADEMARKS  
Washington, D.C. 20231

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 35

Application Number: 08/117,363  
Filing Date: September 3, 1993  
Appellant(s): Cook et al.

---

Joseph Lucci  
For Appellant

**EXAMINER'S ANSWER**

This is in response to appellant's brief on appeal filed 11/9/98.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

Art Unit: 1634

The brief does not contain a statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief. Therefore, it is presumed that there are none. The Board, however, may exercise its discretion to require an explicit statement as to the existence of any related appeals and interferences.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

This appeal involves claims 1-29.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows: A second issue is whether dependent claims 5 and 19 are unpatentable under 35 U.S.C. § 103(a). The rejection of claims 5 and 19 contains the same basic reasoning as the rejection of claims 1-4, 6-18 and 20-29 and has been argued on the same grounds.

Art Unit: 1634

**(7) *Grouping of Claims***

The rejection of claims 1-29 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

**(8) *Claims Appealed***

A substantially correct copy of appealed claims 1-29 appears on pages 1-6 of the Appendix to the appellant's brief. The minor errors are as follows: claims 5 and 19 are missing

**(9) *Prior Art of Record***

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

4,910,300	Urdea et al.	3/1990
4,743,535	Carico	5/1980
WO 92/05186	Matteucci	4/1992
WO 91/14696	Latham	10/1991

**(10) *Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

Urdea et al. teaches a 5'-O-position having an R1 substituent (see Urdea bottom of col 10). Matteucci discloses the claimed "O-C-N" chain (see Matteucci p. 16 lines 30-35) as well

Art Unit: 1634

as numerous other internucleotide linkages (see Matteucci page 13, line 2 to page 20 line 30, for example).

The claims differ from Matteucci in the recitation of terminal linkages. Latham teaches that internucleotide linkages and terminal linkages are art recognized alternatives (see for example Latham page 18, lines 3-17). Latham also teaches the attachment of linkages at the 2' position of the sugar.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to combine the prior art teachings nucleotide linkages because, lacking a showing of criticality, or other secondary consideration, the claimed alkyl chain is considered one of several alternative linkages, any one of which the art skilled would reasonably expect to function in the claimed invention. Furthermore, Carico discloses that the non-critical nature of the various 5' substitutions used for tethering labels to a nucleic acid. Carico discloses, for example at col. 7, lines 15 and 22, that R1 is "a bond or a chain."

Claims 5 and 19 are rejected under 35 U.S.C. § 103 as being unpatentable over Urdea, Carico, Matteucci and Latham as used above, and further in view of applicants admissions.

Claims 5 and 19 further limit there respective base claims to recite a "phthalimido" side group. Applicant admits that this is known in the art at page 12, lines 6-14 of the specification as

Art Unit: 1634

a protecting group. It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to use phthalimido group to protect the amine groups during the organic synthesis process.

**(11) Response to Argument**

Applicant argues, briefly, that the ordinary artisan would not attach “internucleoside” linkages at the “2' position” of a nucleoside and that Latham proposes entirely different class of moieties for use as internucleoside linkages as against those used for 2' linkages.

This argument is not persuasive. First, the claims are not limited to the attachment at the 2' position, but reads on attachment at the 3', 5' or 2' positions. Thus, these arguments are assuming limitations that are not in the claims.

Second, Latham teaches the equivalence of 3', 5' and 2' positions. See Latham page 18, lines 3-17, cited above.

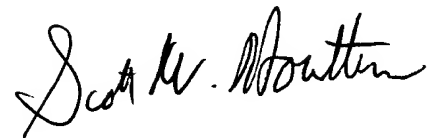
Applicant argues that Latham teaches 2' attachments at page 18, lines 3-29 and “an entirely difference class at page 21, lines 30-36. This argument is not persuasive. First, as stated above, the argument assumes limitations not in the claims. The claims are not limited to attachment at one of 3', 5' or 2', but rather, read on attachment and any of these positions.

Second, the Latham reference has been miss-characterized. The passage at page 18, lines 3-29 teaches 2', 3', 5' and internal attachments, not just 2' attachments.

Art Unit: 1634

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,




SCOTT W. HOUTTEMAN  
PRIMARY EXAMINER


SH

January 19, 1999

WOODCOCK WASHBURN KURTZ  
MACKIEWICZ & NORRIS  
One Liberty Place - 46th Floor  
Philadelphia, PA 19103



Michael G. Wityshyn (CONFIDENTIAL)  
Supervisory Patent Examiner  
Technology Center 1600



W. Gary Jones  
Supervisory Patent Examiner  
Technology Center 1600